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# Oman

*In addition to its relatively modest oil reserves, Oman is important to world oil markets because of its strategic location overlooking the Strait of Hormuz. It is also actively seeking to develop its capacity to export liquefied natural gas.*

*Note: Information contained in this report is the best available as of October 2003 and can change.*



## GENERAL BACKGROUND

Oman has been ruled by Sultan Qaboos bin Said al Said since 1970, when he deposed his father in a bloodless coup. All power is concentrated in the hands of the Sultan, who also holds the top positions in the finance, defense, and foreign affairs ministries. Rules governing the succession to the throne were formalized in the 1996 Basic Law. This removed a source of possible instability given that the Sultan is childless and 60 years old.

There is no Omani legislative assembly, though there are two consultative bodies called the Majlis al-Dawla and the Majlis al-Shura. Together, the two chambers form the Council of Oman. The Majlis al-Dawla is appointed, while the Majlis al-Shura is elected. The next election will be held in October 2003, and there will be universal adult suffrage for the first time.

Oman's relationships with many of its neighbors are complicated by its refusal to join either the Organization of Petroleum Exporting Countries (OPEC) or the Organization of Arab Petroleum Exporting Countries (OAPEC). It also has had strained relations with Yemen, and its border with the United Arab Emirates (UAE) continues to be undefined.

Despite high illiteracy rates (24.2% overall, and 32.8% of women), Oman enjoys relatively good social conditions as reflected by its high life expectancy rate (73 years). Its Human Development Index score in 2002 was 0.751. In 2003, Oman's nominal gross domestic product (GDP) per capita was \$8,593, making it a middle-income developing country.

Oman's macroeconomic environment is strong. Real GDP growth was 3.0% in 2002 and is

projected to increase to 3.5% in 2003. Oman's economy is forecasted to expand by 4.2% in 2004. Inflation is estimated at only 0.1% for 2003.

Oman continues to be heavily dependent on oil revenues, which account for 75% of the country's total export earnings and almost 40% of its gross domestic product (GDP). Prompted by the maturation of its oil fields and the volatility of oil prices, the Omani government has made diversifying the country's economy a top policy priority. In the 1980s, this effort hinged on developing a domestic manufacturing base, but more recent initiatives have focused on the exploitation of Oman's other natural resources, particularly its natural gas reserves. Oman has large mineral and metal deposits, including silica, dolomite, copper, and gold. In September 2003, the government announced that it was reviving a five-year-old plan to build a \$2.5 billion aluminum refinery.

Oman's efforts to diversify the economy also include "Omanization", a program designed to increase the percentage of Omani citizens working in the private sector. At present, Omani nationals constitute only 10% of private sector employment. The government also has continued to attempt to attract foreign investment, particularly in light industry, tourism, and electric power generation. Foreign investment incentives include a 5-year tax holiday for companies in certain industries, an income tax reduction for publicly held companies with at least 51% Omani ownership, and soft loans to finance new and existing projects. Oman is resisting the International Monetary Fund's wishes by keeping taxes low as an economic stimulus measure. This is forcing Oman to withdraw money from its strategic reserve, which was designed to hold funds to soften the blow when Oman ceased to be a major oil producer.

Oman became a member of the World Trade Organization (WTO) in October 2000, and the reforms associated with membership have helped to further reduce the barriers to entry faced by foreign firms. The government is also moving ahead slowly with the privatization of areas like airport-services, Seeb Airport, and Oman Telecommunications Company. Movement continues towards an eventual customs union amongst the Gulf Co-operation Council (GCC) states.

## **OIL**

In many ways, Oman is atypical of Persian Gulf oil producers. Oman's petroleum deposits were discovered in 1962, decades after most of those of its neighbors. Moreover, Oman's oil fields are generally smaller, more widely scattered, less productive, and more costly per barrel than in other Persian Gulf countries. The average well in Oman produces about one-tenth the volume per well of those in neighboring countries. To compensate, Oman uses a variety of enhanced oil recovery (EOR) techniques. While these raise production levels, they increase the cost. Despite this, Oman has succeeded in bringing down the cost of average oil production to between \$3-\$5 per barrel in some fields. While these figures are low by world standards, they remain substantially higher than in most other Persian Gulf oil fields.

Oman has proven recoverable oil reserves of 5.5 billion barrels, the bulk of which are located in the country's northern and central regions. The largest and traditionally most reliable fields are in the north. These fields, which include Yibal (the biggest), Fahud, al-Huwaisah, and several others, are now mature and face future declines in production. Oman's total (i.e. including condensate and other liquids) production figures fell from almost 963,816 barrels per day (bbl/d) in 2001 to less than 901,816 bbl/d in 2002, a decline of 6.4%. In the first seven months of 2003, output has fallen another 6.5% to 843,208 bbl/d. If output continues at the present pace and no new reserves are discovered, Oman has less than 20 years left as a major oil-exporting nation. Given that estimates suggest that the amount of oil originally in place in Oman is around 50 billion barrels, finding ways to increase recoverability is a top priority. As part of its attempts to expand its reserves, in 2003,

Oman signed a six year contract with Spectrum Energy and Information Technology (UK) to have old seismic studies reprocessed.

Petroleum Development Oman (PDO) is the country's second-largest employer after the government. The company is a consortium comprised of the Omani government (60%), Shell (34%), Total (4%), and Partex (2%). It holds over 90% of the country's oil reserves, and accounts for about 94% of production. In early October, PDO's crude production figures had slipped to just over 700,000 bbl/d, down from a high of almost 1 million bbl/d five years ago. PDO now aims to restore and stabilize output at 800,000 bbl/d by 2007. It hopes to achieve this by increasing recovery rates, and by discovering and exploiting new fields, particularly in the south. Among its southern prospects, PDO has the most hope for a cluster of fields that includes Ghafeer, Sarmad, and Harweel. In this "carbonate stringer play," PDO estimates there may be reserves of 250 million barrels, with a potential maximum production level of 100,000 bbl/d.

One of the difficulties that PDO will face in the south is a very large water cut in the fields, which has also become a problem in the north. A proposed solution is the construction of a 300-kilometer (186-mile) pipeline that will carry water from the south for use in reinjection in the north where "water flooding" already has been used successfully on wells in the Yibal and Bahaja fields. The program is costly and would require large amounts of capital investment that would add to the marginal cost of each barrel.

Despite PDO's dominance, several foreign companies are involved in Oman's oil sector, particularly in offshore exploration. In March 2002, Total signed a two-year oil and gas exploration and production-sharing agreement with the government. The contract covers a block of around 4,250 square miles off the southeastern coast of Oman. As part of the agreement, Total agreed to spend at least \$17 million over the two-year period. The company has an option to extend the agreement. Maersk Oil Oman (a subsidiary of Danish energy group AP Moeller), Mitsui & Co. (Japan), Occidental (US) and Hunt Oil (US) have also recently committed to various offshore exploration projects. China's CNPC acquired a foothold in Oman in 2002, taking a 50% stake in Block 5 which it acquired after it was relinquished by the Japanese firm Japex.

Most of Oman's crude oil exports go to East Asia, with China, Japan, and South Korea the largest importers. India also is a significant importer of Omani crude oil.

### **Refining and Petrochemicals**

In 1982, Oman constructed its first refinery, at Mina al-Fahal. The plant's capacity is now 85,000 bbl/d. Output from the facility, which is operated by the state-owned Oman Refinery Company (ORC), is used to meet local product demand. In June 2002, SK Engineering of South Korea was awarded a contract for the construction of a new desulfurization unit at Mina al-Fahal.

A second refinery will be built near the northern city of Sohar. Bids for construction of the project were solicited in March 2002, and JGC Corporation (Japan) was awarded the contract in May 2003. To facilitate this, Oman announced plans in April 2003 to build a \$1 billion pipeline that will run the 162 miles between the Oman Refinery Company and the new refinery in Sohar. When both the pipeline and the refinery come onstream in 2006, the line is to transport a mixed feedstock of crude from PDO and long residue from the Oman Refinery to Sohar for processing. The refinery's capacity is expected to be 51,000 bbl/d of gasoline and 30,000 bbl/d each of diesel and fuel gas. The plant will also have a facility for extracting sulfur from gasoline and a catalytic cracker that will produce gas and gasoline from the leftover elements of the normal refining process. Output from the new refinery is expected to be used to meet local demand.

Oman is pursuing petrochemical projects as a way of diversifying its economy and developing value-added industries. In January 2001, Ferrostaal (Germany) signed a contract with the Omani government to build a methanol plant in Sohar. The deal is estimated to be worth over \$420 million and is a joint venture between Ferrostaal, the state-owned Omani Oil Company, and a private Omani group, Omzest. The project will utilize some of the 5 trillion cubic feet (Tcf) of gas that the Omani government has made available to new industries in Sohar. The plant is forecasted to come onstream in 2005 and has a projected production capacity of 5,000 tons of methanol per day.

## **NATURAL GAS**

Natural gas has become the chief focus of Oman's economic diversification strategy. Intense exploration has raised proven natural gas reserves from only 12.3 Tcf in 1992 to just under 30 Tcf in 2003 according to the Oil and Gas Journal. This figure could increase by as much as another 2 Tcf when the gas beneath the Dakhiliya field is accounted for. The government is also continuing its aggressive exploration campaign. Most of Oman's reserves are in PDO-owned areas, and the company is Oman's biggest natural gas producer. Most gas in Oman is associated with oil, but even that which is non-associated is often located close to the country's oil fields. More than 10 Tcf of Oman's non-associated natural gas is located in deep geological structures, many of which are beneath active oil fields. In 2001, Oman is estimated to have produced 486 billion cubic feet (Bcf) of natural gas.

In addition to the PDO, a number of foreign firms are involved in Oman's natural gas sector. In September 2003, Atlantis, a subsidiary of the Chinese firm Sinochem, began to drill a gas find containing up to 300 Bcf. Gulfstream (now Anadarko) was the first private company to be awarded an onshore gas concession. In August 2001, it received a fixed price gas sales agreement with the government and a 100% concession to develop three gas fields it discovered in Haffar Block 30. Anadarko has already drilled an exploratory well, and hopes to reach an eventual output level of over 80 million cubic feet per day. The field has proven reserves of 300 Bcf.

Novus Petroleum Ltd. (Australia) signed an exploration and production agreement with the Omani government for Blocks 15 and 47 in northern Oman in May 2001. The deal committed Novus to a three-year exploration period, which could be extended depending on the results of the exploration. The blocks form part of the same geological structure as Novus' offshore gas producing field in Block 8, in the Straits of Hormuz. In April 2002, Novus signed another agreement for Block 31. The company is also likely to be involved in developing the Omani portion of the Iranian-Omani jointly held West Bukha/Hengam gas field once an agreement is worked out between Iran and Oman. The field holds an estimated 3 Tcf of gas.

Oman's gas network has been placed under the authority of Oman Gas Company (OGC), set up by the government to oversee the sultanate's gas development program. In April 2001, Oman awarded a contract to operate the country's natural gas transportation and distribution infrastructure for the next five years to Canada's Enbridge and BC Gas (now Terasen). The contract includes a provision for technology transfer and training, so operation can be shifted to Omani staff after five years.

In addition to increasing reserves and production, Oman would like to enlarge its existing pipeline network and is using foreign construction companies to do so. In 2002, the contractors completed two lines to connect the reserves in the middle of the country to the coast. One cost \$124 million and connects with Sohar. The other cost \$180 million and connects with Salalah. There is also an older 500-mile gas trunk line connecting the central fields with power plants and the processing facility of the Oman Liquefied Natural Gas Company (OLNGC), a consortium whose shareholders are the government (51%), Shell (30%), Total (5.54%), and Korea LNG (5%), Mitsubishi (2.77%), Mitsui & Co. (2.77%), Partex (2%), and Itochu (0.92%).

Oman is one of the participants in the \$3.5 billion Dolphin project being led by Dolphin Energy Limited (DEL, a joint-venture between the UAE government, Total, and Occidental Petroleum). The goal is to link the gas networks of Qatar, the UAE, and Oman as well as to eventually help supply the south-Asian subcontinent. Under a deal reached in March 2003, OGC will begin supplying gas to DEL in the fourth quarter of 2003. Deliveries will continue for a period of up to five years.

### **Liquefied Natural Gas (LNG) Exports**

LNG constitutes a large part of Oman's plan to develop its natural gas sector, and the country is investing heavily in it. Oman's LNG program is being coordinated by OLNCG. In 2002, Oman's total LNG production was 6.6 million tons, of which 6.5 million tons were exported.

Since 2000, production has been evenly split between between two liquefaction plants (commonly referred to as 'trains') located at Qalhat, each with a capacity of 3.3 million tons. A third train is expected to increase production capacity by 50% when it comes on line in 2005-2006. It will be a joint-venture between the state (52%), OLNCG (40%), and Union Fenosa (Spain, 8%). There have been preliminary discussions with India over the possibility of that country taking an equity stake in a possible fourth train. The viability of the project depends on the number of future customers for the country's gas. At present, the two Qalhat trains are operating almost at the limits of their capacity, and Union Fenosa has already signed a 20-year contract for half of the third train's output once it comes on line. Other major LNG purchasers are Kogas (South Korea), Daghool Power (India), and Osaka Gas (Japan). Spot deliveries to Europe and North America are also common.

### **COAL**

Over 22 million tons of coal deposits have been discovered in the Wadi Muswa and Wadi Fisaw areas near the city of Sur. The coal could be used to provide 40 years of power for a 300 megawatt (MW) generator.

### **ELECTRIC POWER**

In 2001, Oman's installed capacity was estimated at 2.4 gigawatts (GW). With the exception of some very remote villages, the entire country is electrified.

Like other Gulf states, Oman faces growing demand for electricity due to population growth, industrialization, and rising incomes. Consumption is now increasing by 4-5% a year, and the government forecasts that electricity demand will be 75% higher in 2015 than it is today. To meet this challenge, Oman has allowed the private sector to take on a growing role. The Ministry of Electricity and Water (MEW) continues to play a role as regulator. The MEW also remains responsible for distribution. In July 2003, the MEW announced that it was setting up a new company, the Transmission and Distribution Company (TRANSCO), that would oversee the generation and supply of electricity in the country. It also announced that it would be selling 65% of the new firm to private investors.

There have been several notable privatizations. The 1996 sale of a 90-MW power station in Al-Manah to Trachtebel (Belgium) produced the region's first independent power project (IPP). In 2001, a deal to sell a 200-MW plant in Salalah to Dhofar Power Consortium (DPC) went through. It was the first deal in the region to cover generation, transmission, distribution, billing and collection. As part of the contract, DPC is to improve the generation and distribution facilities.

Oman has also agreed to the establishment of a number of new IPPs. In 2000, it agreed to plans to build the 280-MW al-Kamil power plant at al-Sharqiya. The 430-MW Barka power and

desalination plant is expected to begin operating by the end of 2003. Both the Barka and al-Kamil plants are to run on natural gas. All three of the DPC, Barka, and al-Kamil were commissioned in 2003.

In addition, America's Public Services Enterprise Group (PSEG) is building a 200-MW integrated power facility that will supply the Dhofar region. A 140-MW plant is under construction in Qarn Alam. It is expected to go online sometime in the middle of 2004.

For the last 20 years, the MEW have contracted out all billing and collecting services to the Oman Investment and Finance Company. The MEW is now considering whether it will reduce costs if the contract is split among more than one company.

*Sources for this report include: CIA World Factbook 2003; Economist Intelligence Unit ViewsWire; Factiva News Service; Global Insight; Oil and Gas Journal; Petroleum Economist; Petroleum Intelligence Weekly; Power Engineering; Stratfor News Service; U.S. Energy Information Administration; World Gas Intelligence; World Markets Online.*

## **COUNTRY OVERVIEW**

**Head of State:** Sultan Qaboos bin Said al Said

**Independence:** 1650 (end of Portuguese rule)

**Population (2002E):** 2.8 million (includes 577,293 non-nationals)

**Location/Size:** Southeast Arabian Peninsula / 82,031 sq. mi. (about the size of Kansas)

**Major Cities:** Muscat (capital), Salalah, Sur, al-Khasab

**Languages:** Arabic (official), English, Baluchi, Urdu, Indian dialects

**Ethnic Groups:** Arab, Baluchi, South Asian (Indian, Pakistani, Sri Lankan, Bangladeshi), African

**Religion:** Muslim (Ibadi -- 75%, Sunni, Shi'a), Hindu

## **ECONOMIC OVERVIEW**

**Minister of Finance:** Sultan Qaboos bin Said al Said

**Currency:** Omani rial (OMR)

**Exchange Rate (10/06/03):** \$1 = 0.385 Omani Rial (fixed within narrow band: \$1=0.384-0.385 Omani rial)

**Nominal Gross Domestic Product (GDP) (2002E):** \$21.0 billion **(2003E):** \$22.1 billion **(2004F):** \$23.6 billion

**Real GDP Growth Rate (2002E):** 3.0% **(2003E):** 3.5% **(2004F):** 4.2%

**Nominal Per Capita GDP (2002E):** \$8,336 **(2003E):** \$8,593 **(2004F):** \$8,927

**Inflation Rate (consumer prices) (2002E):** -0.7% **(2003E):** 0.1% **(2004F):** 0.1%

**Major Trading Partners:** Japan, United Arab Emirates, South Korea, United Kingdom, United States, Thailand, Germany, Italy

**Merchandise Trade Balance (2002E):** \$4.6 billion **(2003E):** \$4.1 billion **(2004F):** \$3.9 billion

**Major Export Products:** petroleum, reexports, fish, metals, textiles

**Major Import Products:** machinery and transport equipment, manufactured goods, food, livestock, lubricants

**Current Account Balance (2002E):** \$1.2 billion **(2003E):** \$0.6 billion **(2004F):** \$0.3 billion

**Total External Debt (2002E):** \$5.7 billion

## **ENERGY OVERVIEW**

**Minister of Oil and Gas:** Mohammed al-Rumhi

**Proven Oil Reserves (1/1/03E):** 5.5 billion barrels

**Oil Production (2002E):** 901,723 barrels per day (bbl/d), of which 896,723 bbl/d is crude oil

**Oil Production (January - July 2003E):** 843,208 bbl/d, of which 838,208 bbl/d is crude

**Oil Consumption (2002E):** 52,000 bbl/d **(2003E):** 51,000 bbl/d  
**Net Oil Exports (2002E):** 844,728 bbl/d **(2003E):** 792,208 bbl/d  
**Crude Oil Refining Capacity (1/1/03E):** 85,000 bbl/d  
**Oil Export Customers (2001):** China, Japan, South Korea, Thailand, Singapore, Taiwan, India  
**Natural Gas Reserves (1/1/03E):** 29.3 trillion cubic feet  
**Natural Gas Production (2001E):** 486 billion cubic feet (Bcf)  
**Natural Gas Consumption (2001E):** 224 Bcf  
**Electric Generation Capacity (1/1/01E):** 2.4 gigawatts  
**Electricity Production (2001E):** 8.6 billion kilowatt-hours

## ENVIRONMENTAL OVERVIEW

**Minister of Regional Municipalities, Environment, and Water Resources:** Dr. Khamis bin Mubarak bin Isa al-Alawi

**Special Advisor to His Majesty for Environmental Affairs:** Shabib bin Taymur Al Said

**Total Energy Consumption (2001E):** 0.34 quadrillion Btu\* (<0.1% of world total energy consumption)

**Energy-Related Carbon Emissions (2001E):** 6.1 million metric tons of carbon (<0.1% of world total carbon emissions)

**Per Capita Energy Consumption (2001E):** 131.5 million Btu (vs. US value of 341.8 million Btu)

**Per Capita Carbon Emissions (2001E):** 2.3 metric tons of carbon (vs. US value of 5.5 metric tons of carbon)

**Energy Intensity (2001E-PPP):** 13,080 Btu/\$1995 (vs US value of 10,811 Btu/\$1995)\*\*

**Carbon Intensity (2001E-PPP):** 0.23 metric tons of carbon/thousand \$1995 (Vs US value of 0.17 metric tons/thousand \$1995)\*\*

**Fuel Share of Energy Consumption (2001E):** Natural Gas (67.6%), Oil (32.4%), Coal (0.0%)

**Fuel Share of Carbon Emissions (2001E):** Natural Gas (65.5%), Oil (34.5%), Coal (0.0%)

**Status in Climate Change Negotiations:** Non-Annex I country under the United Nations Framework Convention on Climate Change (ratified February 8th, 1995). Not a signatory to the Kyoto Protocol.

**Major Environmental Issues:** rising soil salinity; beach pollution from oil spills; very limited natural fresh water resources

**Major International Environmental Agreements:** A party to Conventions on Biodiversity, Climate Change, Desertification, Hazardous Wastes, Law of the Sea, Marine Dumping, Ozone Layer Protection, Ship Pollution, Whaling.

\* The total energy consumption statistic includes petroleum, dry natural gas, coal, net hydro, nuclear, geothermal, solar, wind, wood and waste electric power.

\*\*GDP figures are based on OECD figures using purchasing power parity (PPP) exchange rates.

## OIL AND GAS INDUSTRIES

**Organizations:** Petroleum Development Oman Ltd. (PDO) controls all oil resources. PDO is a partnership between the Omani government (60%), Royal Dutch/Shell (34%), Total (4%), and Partex (2%). Oman Oil Company (OOC) is the investment arm of the Ministry of Petroleum.

**Major Foreign Oil Company Involvement (non-PDO):** BP, CNPC, IPC, Itochu, Japex, Occidental, Phillips

**Major Oil Fields:** Roughly 1.8 billion barrels in reserves are located in the large northern structure containing the Yibal, Natih, Fahud, al-Huwaisah, Lekhwair, and Shibkah fields. Other key fields are the southern Marmul and Nimr fields as well as Occidental's 120-million barrel Safah field and the estimated 400-million barrel Amal Eastern High field, which contains heavy crude oil.

**Major Refinery:** Mina al-Fahal (85,000 bbl/d)

**Major Oil Terminal:** Mina al-Fahal

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## LINKS

For more information from EIA on Oman, please see:

[EIA - Country Information on Oman](#)

Links to other US government sites:

[CIA World Factbook - Oman](#)

[State Department Country Commercial Guide - Oman \(FY 2002\)](#)

[State Department Consular Information Sheet - Oman](#)

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